IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	Daniel Doe and Donald Gosiewski
Serial No.	:	10/072,696
Filed	:	February 7, 2002
For	:	TWO-PART STRUCTURAL ADHESIVE AND LAMINATES

DECLARATION UNDER 37 C.F.R. §1.132

I, Donald Gosiewski, hereby state and declare as follows:

1. I received a B.S. Chemistry from the University of Massachusetts in 1973 and a Ph.D. in Organic Chemistry from the University of Wisconsin in 1978. I currently hold the position of Research Manager at ITW Plexus, where I have been employed since 1982. My current responsibilities at ITW Plexus include research and development of structural adhesives including acrylate and methacrylate based adhesives. During my tenure at ITW Plexus I have been listed as an inventor on the following eight (8) U.S. patents all relating to structural adhesives: 4,714,730; 4,942,201; 4,959,405; 5,112,691; 5,206,288; 5,945,461; 6,512,043; and 6,462 126.

2. I am a co-inventor of the subject matter described and claimed in U.S. Serial No. 10/072,696.

3. Under my supervision an experiment was conducted comparing the bonding properties of adhesive compositions of the above-identified application to the adhesive compositions of U.S. Patent No. 4,403,058 to Dohi et al. ("Dohi"). Three adhesive compositions were prepared in the same manner as samples 1, 3 and 4 set forth in Table 3, at page 26, of the application (i.e., Serial No. 10/072,696). Sample 1 was a comparative adhesive since the sample contained 3.15 weight percent zinc dimethacrylate and is thus representative of the prior art.

Samples 3 and 4 both contained about 1 weight percent zinc dimethacrylate and are thus representative of the claimed invention. An adhesive composition was also prepared in accordance with sample 7 of Dohi, which is listed in Table 3 of example 2. In accordance with example 2 of Dohi, the adhesive composition was prepared from two parts: a first part including 6.44 weight percent zinc methacrylate as listed for system I (i.e., sample 7 listed in Table 1 of example 1); and a second part including 5 parts by weight of magnesium methacrylate as listed for system II (i.e., sample 10' listed in Table 2 of example 1).

4. The comparative adhesive (sample 1), the inventive adhesives (samples 3 and 4), and the Dohi adhesive were all evaluated for 0.03 inch gap bond durability on three different metals in accordance with the examples of the above-identified application: (1) cold rolled steel; (2) aluminum 6061; and (3) stainless steel. The durability of a 0.03 inch gap bond was selected since performance on this test is clearly indicative of an adhesive's suitability as a structural adhesive. In addition, the metal substrates for the Dohi adhesive were abraded to provide an extra advantage for durability while the substrates for the samples of the above-identified application were not abraded. The results are listed in Tables 1-4.

Table 1

Metal .03 Inch Bond Durability-Dohi Patent
Adhesive liquid system I #7 with liquid system II #10

Substrate	Initial Bond Strength	Bond Strength after 14 Day Salt Spray	% Retention
Cold Rolled Steel Abraded	1611 psi	766 psi	48%
Aluminum 6061 Abraded	1590 psi	872 psi	55%
Stainless Steel Abraded	2098 psi	981 psi	47%

Table 2			
Metal .03 Inch Bond Durability- Sample 3 of Table 3			
Substrate	Initial Bond Strength	Bond Strength after 14 Day Salt Spray	% Retention
Cold Rolled Steel Not Abraded	2240 psi	2318 psi	103 %
Aluminum 6061 Not Abraded	2453 psi	2112 psi	86 %
Stainless Steel Not Abraded	2388 psi	2450 psi	103 %

Table 3			
Metal .03 Inch Bond Durability- Sample 4 of Table 3			
Substrate	Initial Bond Strength	Bond Strength after 14 Day Salt Spray	% Retention
Cold Rolled Steel Not Abraded	2215 psi	2029 psi	93 %
Aluminum 6061 Not Abraded	2676 psi	1870 psi	70 %
Stainless Steel Not Abraded	2580 psi	2482 psi	96 %

Table 4			
Metal .03 Inch Bond Durability- Comparative Sample 1 of Table 3			
Substrate	Initial Bond Strength	Bond Strength after 14 Day Salt Spray	% Retention
Cold Rolled Steel Not Abraded	2132 psi	1923 psi	90 %
Aluminum 6061 Not Abraded	2453 psi	1107 psi	45 %
Stainless Steel Not Abraded	2183 psi	2157 psi	99 %

6. The results obtained by this experiment show that the inventive adhesive compositions (e.g., samples 3 and 4 of Table 3 of the application) consistently outperformed the Dohi adhesive on all three (3) types of metal substrates. In addition, while the adhesive compositions for samples 1, 3 and 4 contained additional components such as zinc molybdate, these additional components do not alter the probative value of the data. For example, comparative sample 1 (which contained 3.15 weight percent zinc dimethacrylate) exhibited a retention of bond strength on aluminum 6061 of only 43 %. The Dohi adhesive (which contained 6.64 weight percent zinc dimethacrylate) exhibited a retention of bond strength on aluminum 6061 of only 55 %. Thus, the Dohi adhesive overall was no better than the adhesive of comparative sample 1.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

July 29, 2003
Date

Donald Gosiewski